IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1. – 5. (Canceled).

6. (Currently Amended) A method to provide a data management system, comprising:

preprocessing a database having a relation to produce an index, wherein said preprocessing step comprises:

identifying a dominating vector of constants, $\overline{c}$ ' for a given n-dimensional vector of constants $\overline{c}$;

receiving at a computer having a query optimization module a query having aggregation constraints, wherein said aggregation constraints are Optimization under Parametric Aggregation Constraints (OPACs);

applying at said computer having said query optimization module said index to look up a result in response to said query having aggregation constraints; and

providing said result, wherein said result is an approximation.

7. (Original) The method of claim 6, wherein said preprocessing step further comprises:

obtaining a partition defined by said vector $\overline{c}$ and said vector $\overline{c}$ '.

8. (Original) The method of claim 7, wherein said partition is expressed as a hyper rectangle.

9. (Original) The method of claim 7, wherein said preprocessing step further comprises:

inserting said partition into a multidimensional data structure.

10.   (Original) The method of claim 9, wherein said multidimensional data structure is an R-Tree.

Claims 11. – 24. (Canceled).